IN THE CLAIMS:

Please cancel claims 1-2, 4-5, 8, and 11 without prejudice, and amend the claims as follows:

1-5. (Cancelled)

6. (Previously Presented) A method for processing a substrate, comprising:

depositing a low dielectric constant layer on the substrate in a processing chamber by a plasma enhanced chemical vapor deposition process; and

treating the low dielectric constant layer with an in situ passivating process comprising:

introducing a nitrating gas selected from the group consisting of ammonia, nitrogen, nitrous oxide, and combinations thereof, into the processing chamber;

generating a plasma of the processing gas in the processing chamber; and

exposing the low dielectric constant layer to the plasma of the processing gas.

7. (Original) The method of claim 6, wherein the nitrating gas forms a nitrided surface on the low dielectric constant layer.

8. (Cancelled)

9. (Original) The method of claim 8, wherein the low dielectric constant layer is exposed to the plasma for between about 10 and about 120 seconds.

10. (Previously Presented) The method of claim 6, wherein the low dielectric constant layer comprises silicon carbide.

11. (Cancelled)

12. (Original) The method of claim 11, wherein the low dielectric constant layer has an oxygen content of about 6% or less by atomic concentration.

13. (Currently Amended) A method for processing a substrate, comprising:

depositing a silicon carbide layer on the substrate in a processing chamber;

introducing a processing gas ~~selected from the group of an inert gas,~~ comprising a nitrating gas~~, or combinations thereof,~~ into the processing chamber;

generating a plasma of the processing gas in the processing chamber; and

modifying a surface of the silicon carbide layer by exposing the silicon carbide layer to the plasma of the processing gas to form a passivating surface on the silicon carbide layer.

14. (Currently Amended) The method of claim 13, wherein the processing gas further comprises an inert gas [[is]] selected from the group consisting of helium, argon, and combinations thereof.

15. (Currently Amended) The method of claim 13, wherein ~~the processing gas is an inert gas and~~ the density of the surface of the silicon carbide layer is increased.

16. (Original) The method of claim 13, wherein the nitrating gas is selected from the group consisting of ammonia, nitrogen, nitrous oxide, and combinations thereof.

17. (Original) The method of claim 13, wherein the processing gas comprises a nitrating gas and a nitrided surface is formed on the low dielectric constant layer.

18. (Original) The method of claim 13, wherein exposing the low dielectric constant layer to the plasma comprises supplying a power density between about 0.3 watts/cm^2 and about 3.2 watts/cm^2 to the processing chamber to generate the plasma.

19. (Original) The method of claim 18, wherein the low dielectric constant layer is exposed to the plasma for between about 20 and about 60 seconds.

20. (Original) The method of claim 13, wherein the chamber pressure is between about 1 Torr and about 12 Torr.

21. (Currently Amended) The method of claim 13, wherein processing the substrate comprises introducing a processing gas ~~of an inert gas,~~ comprising a nitrating gas~~, or combinations thereof,~~ into the processing chamber at a flow rate of about 3000 sccm or less, maintaining the processing chamber at a pressure of between about 5 Torr and about 10 Torr, generating the plasma by supplying a power density between about 1.2 watts/cm^2 and about 1.6 watts/cm^2 to the processing chamber, and maintaining the plasma between about 20 and about 60 seconds.

22. (Original) The method of claim 13, wherein the silicon carbide layer is a barrier layer, an etch stop, a passivation layer, or an anti-reflective coating.

23. (Original) The method of claim 13, wherein the silicon carbide layer has an oxygen content of about 6% or less by atomic concentration.

24. (Currently Amended) A method for forming a low dielectric constant barrier layer on a substrate, comprising:

depositing a silicon carbide layer on the substrate; and

depositing a passivating layer comprising silicon and nitrogen on the silicon carbide layer by a process comprising:

introducing a silicon containing gas and a nitrogen containing gas into a process chamber containing the substrate;

initiating a plasma in the process chamber; and

reacting the silicon containing gas and the nitrogen containing gas in the presence of the plasma to deposit the passivating layer comprising silicon and nitrogen.

25. (Original) The method of claim 24, wherein the passivating layer comprises silicon nitride or silicon oxynitride.

26. (Cancelled)

27. (Previously Presented) The method of claim 24, wherein the silicon containing gas is selected from the group of silane, methylsilane, trimethylsilane, substituted derivatives thereof, and combinations thereof.

28. (Previously Presented) The method of claim 24, wherein the nitrogen containing gas is selected from the group consisting of ammonia, nitrogen, nitrous oxide, and combinations thereof.

29. (Previously Presented) The method of claim 24, wherein the plasma is generated by supplying a power density between about 0.3 watts/cm^2 and about 3.2 watts/cm^2 to the chamber.

30. (Previously Presented) The method of claim 24, wherein the chamber pressure is between about 1 Torr and about 25 Torr.

31. (Original) The method of claim 24, wherein the passivating layer comprising silicon and nitrogen is deposited at a thickness between about 25Å and about 500Å.

32. (Previously Presented) The method of claim 6, wherein exposing the low dielectric constant layer to the plasma comprises supplying a power density between about 0.08 watts/cm^2 and about 6.4 watts/cm^2 to the processing chamber to generate the plasma.

33. (Previously Presented) The method of claim 32, wherein the low dielectric constant layer is exposed to the plasma for between about 10 and about 120 seconds.

34. (Currently Amended) The method of claim 6, wherein processing the substrate comprises introducing a processing gas ~~of an inert gas,~~ comprising a nitrating gas~~, or combinations thereof,~~ into the processing chamber at a flow rate of about 3000 sccm or less, maintaining the processing chamber at a pressure of between about 1 Torr and about 12 Torr, generating the plasma by supplying a power density between about 0.3 watts/cm^2 and about 3.3 watts/cm^2 to the processing chamber, and maintaining the plasma between about 20 and about 60 seconds.

35. (Previously Presented) The method of claim 34, wherein the low dielectric constant layer has an oxygen content of about 6% or less by atomic concentration.

36. (Previously Presented) The method of claim 24, wherein depositing the passivation layer is performed in situ with depositing the silicon carbide layer.

37. (Previously Presented) The method of claim 13, wherein modifying a surface of the silicon carbide layer is performed in situ with depositing the silicon carbide layer.